

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL, INSTALLATION OF THE APS (ACCESSIBLE PEDESTRIAN SIGNALS)/ CPS (COUNTDOWN PEDESTRIAN SIGNALS) AND THE INSTALLATION OF ADA COMPLIANT SIDEWALK RAMPS AT THE INTERSECTION OF MD 45 (YORK ROAD) AND FREELAND ROAD IN BALTIMORE COUNTY, MARYLAND. MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL REMAIN THE SAME.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 45 (YORK ROAD) AND FREELAND ROAD - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS YORK AT FREELAND, WAIT." *

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS), 2-WIRE APS CENTRAL CONTROL UNIT, INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE 5" BASE MOUNTED CABINET.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 229-2381

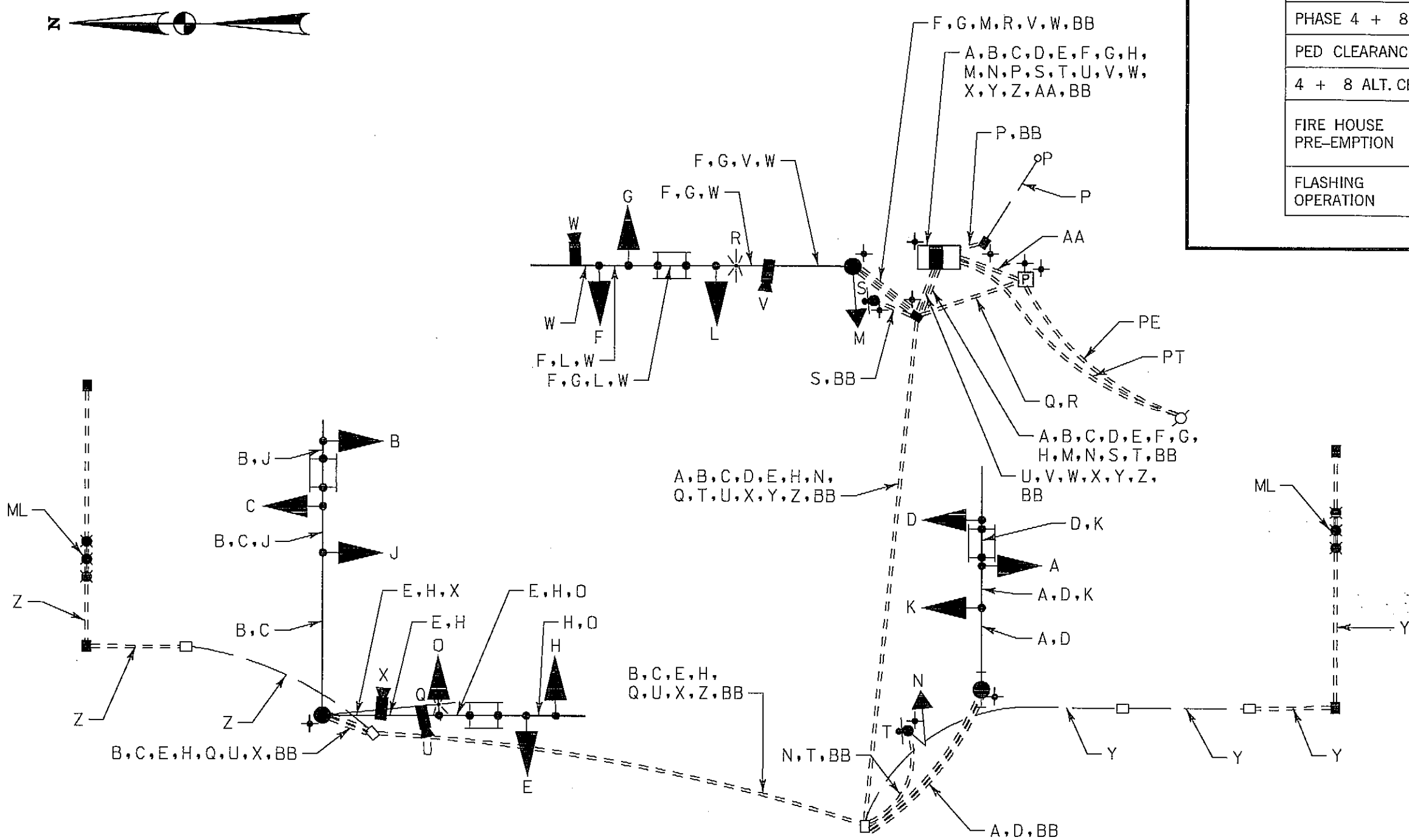
MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 229-2361

MR. MIKE PASQUARIELLO
DISTRICT UTILITY ENGINEER
PHONE: (410) 229-2341

MR. ROBERT SNYDER
ASSISTANT CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7635

MRS. CORREN JOHNSON
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

WIRING DIAGRAM



EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE	QUANTITY	DESCRIPTION
900000	80 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 2 EACH D-3(1) SIGN (66 IN. x 16 IN.) (DUAL FACED) TO READ "Freeland RD"
		- 2 EACH D-3(1) SIGN (54 IN. x 16 IN.) (DUAL FACED) TO READ "York RD"
		- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSH BUTTON TO CROSS YORK ROAD"
		- 2 EACH M1-5 SIGN (24 IN. x 24 IN.)
		- 2 EACH M6-1 SIGN (21 IN. x 15 IN.)
		- 1 EACH M3-3 SIGN (24 IN. x 12 IN.)
		- 1 EACH M3-1 SIGN (30 IN. x 15 IN.)
		- 1 EACH M1-5 SIGN (36 IN. x 36 IN.)
		- 1 EACH M6-1(1) SIGN (30 IN. x 24 IN.)
		- 1 EACH M3-1 SIGN (24 IN. x 12 IN.)
		- 1 EACH M1-5(6) SIGN (36 IN. x 72 IN.)
900000	1 EA	CONTROLLER CABINET, SIZE "S" WITH CONTROL, VIDEO INTERFACE EQUIPMENT 1-8 CAMERAS

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

NONE

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.02-02 (SHOULDER WORK)

STANDARD NO. MD-104.02-14 (INTERSECTION

STANDARD NO. MD-104.02-10 (FLAGGING OPERATION)

FLAGGING OPERATION)

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
PHASE 4 + 8 ALT.	R	R	R	R	R	R	G	G	G	G	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	FLDW	FLDW
4 + 8 ALT. CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
FIRE HOUSE PRE-EMPTION	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW
	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

WIRING KEY

- A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 3-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- VIDEO CAMERA DETECTION LEAD-IN CABLE
- NON-INVASIVE PROBE LEAD-IN

- AA (3) 1-CONDUCTOR CABLE (NO. 8 A.W.G.)
- BB STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- ML NON-INVASIVE PROBE SET
- PT PROPOSED UNDERGROUND TELEPHONE SERVICE
- PE PROPOSED UNDERGROUND ELECTRICAL SERVICE
- + - 3/4 IN. X 10 FT. GROUND ROD

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE	QUANTITY	DESCRIPTION
100000	1 EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	1 CY	CLASS 2 EXCAVATION
203030	6 CY	TEST PIT EXCAVATION
585621	136 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	136 LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	160 LF	TYPE A COMBINATION CONCRETE CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	50 LF	TYPE A CURB ANY HEIGHT OR DEPTH
600000	22 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS (TYPE 3 BRICK PAVERS)
655105	350 SF	5 INCH CONCRETE SIDEWALK
800000	1 EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	2 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	2 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	2 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	4 EA	1P-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	2 EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1 EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
800000	1 EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
800000	1 EA	TWIN MAST ARM POLE & 50'/60' MAST ARMS ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
800000	1 EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	2 EA	NONINVASIVE DETECTOR WITH ANY LENGTH LEAD-IN CABLE UP TO 1000'
800000	1 EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION AND GROUND ROD
800000	400 LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B.W.G) TYPE TC
800000	275 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	585 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	53.5 LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	80 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1 EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	360 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	50 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	6 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	36 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	180 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	500 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1850 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 45 (YORK ROAD) AND FREELAND ROAD
MARYLAND LINE, MD

GENERAL INFORMATION SHEET

SCALE NONE DATE 04/08/2013 CONTRACT NO. XY1515185

DESIGNED BY JDC COUNTY BALTIMORE

DRAWN BY SMD LOGMILE 03004525.60

CHECKED BY NML TMS NO. L825

F.A.P. NO. TOD NO.

TS NO. 1644B DRAWING TSP-3 OF 3 SHEET NO. 3 OF 3

WR&A

WHITMAN, REQUARDT
& ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

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FILE: N:\91689-246\CADD\p93-TSP03_MD45_Freeland.dgn